

App. No. 10/727,676
Office Action Dated September 7, 2005

REMARKS

Favorable reconsideration of this application is requested in view of the above amendments and the following remarks. The Specification and claims 1 and 12-14 are hereby amended.

Amendment of the Specification is supported by Figures 1, 6, 10, and 16. Amendment of claim 1 is supported by Figure 6. Claims 12 and 13 are amended editorially. Claim 14 is rewritten in independent form.

The drawings were objected to for including reference characters not included in the Specification. The Specification is amended to address the concerns of the Examiner. Favorable reconsideration of the drawings is requested.

Claims 12 and 13 were objected to for informalities. Claims 12 and 13 are amended to address the concerns of the Examiner. Favorable reconsideration of claims 12 and 13 is requested.

Claims 1-7 and 10-13 were rejected as being unpatentable over Rhodes (US 2004/0094784) in view of Applicants' admitted prior art (AAPA) and Sasaki (US 4,471,525). Applicants traverse this rejection. Even if the combination of the references teaches a STI leakage stopper that is formed to enclose side walls and a bottom face of an element isolating portion, as contended in the rejection, the combination of the references does not suggest a solid-state imaging device including a pn junction comprising a photodiode that is positioned so as to be separate from the STI leakage stopper formed along side walls and a bottom face of an element isolating portion, as required by claim 1. The claimed configuration advantageously suppresses a leakage current flowing from the element isolating portion to the photodiode. The STI leakage stopper is formed so as to cover a region where a large strain is caused in the semiconductor substrate. The strain causes STI stress defects within and adjacent to the STI leakage stopper side walls of the element isolation portion, thereby increasing the possibility of leakage current in spite of the existence of the leakage stopper. The invention of claim 1 further

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suppresses leakage by separating the pn junction from the STI leakage stopper. Favorable reconsideration of claims 1-7 and 10-13 is requested.

Claims 8 and 9 were rejected as being unpatentable over Rhodes in view of AAPA and Sasaki, and further in view of Yoneyama (US 5,719,626). Applicants traverse this rejection. Claims 8 and 9 should be considered allowable for at least the same reasons as claim 1, from which they depend. Yoneyama does not remedy the deficiencies of Rhodes, AAPA, and Sasaki, as previously noted. Favorable reconsideration of claims 8 and 9 is requested.

In view of the above, favorable reconsideration in the form of a notice of allowance is requested. Any questions regarding this communication can be directed to the undersigned attorney, Douglas P. Mueller, Reg. No. 30,300, at (612)455-3804.

Respectfully Submitted,

Dated: December 7, 2005
~~November~~



A handwritten signature in black ink, appearing to read "Douglas P. Mueller".

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